ABSTRACT

An R-Fe-B permanent magnet wherein R is Nd or a combination of Nd with a rare earth element is prepared by casting an R-Fe-B alloy, crushing the alloy in an oxygen-free atmosphere of argon, nitrogen or vacuum, effecting comminution, compaction, sintering, aging, and cutting and/or polishing the magnet to give a finished surface. The magnet is then heat treated in an argon, nitrogen or low-pressure vacuum atmosphere having a limited oxygen partial pressure, obtaining a highly oil resistant sintered permanent magnet having corrosion resistance and hydrogen barrier property even in a high pressure hot environment of refrigerant and/or lubricant as encountered in compressors.